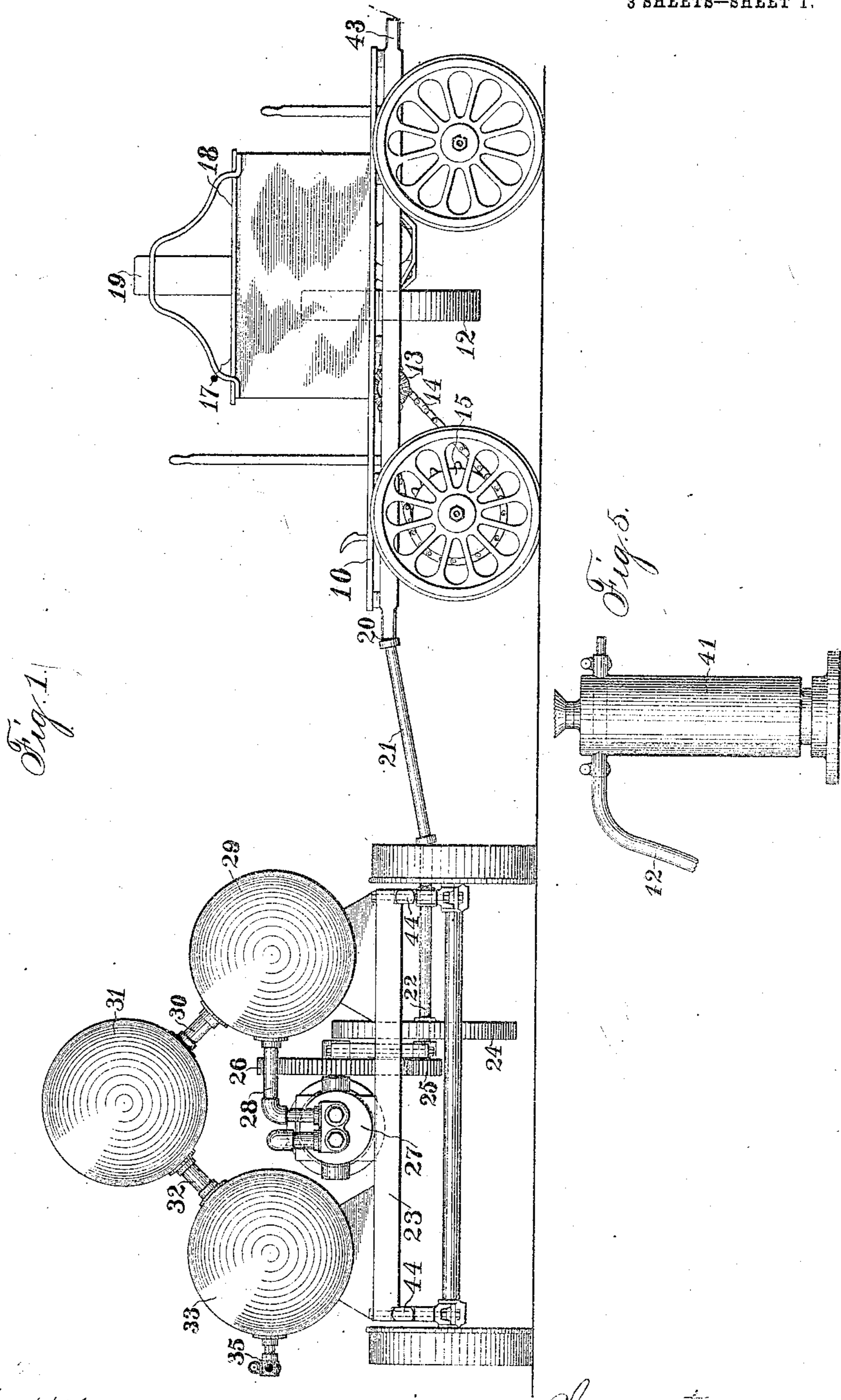


H. W. JACOBS.
 TRACK LAYING APPARATUS.
 APPLICATION FILED SEPT. 1, 1908.

934,728.

Patented Sept. 21, 1909.
 3 SHEETS—SHEET 1.



Witnesses;
 F. P. Prindle.
 M. E. Munk.

Inventor:
 Henry W. Jacobs.
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Fig. 2.

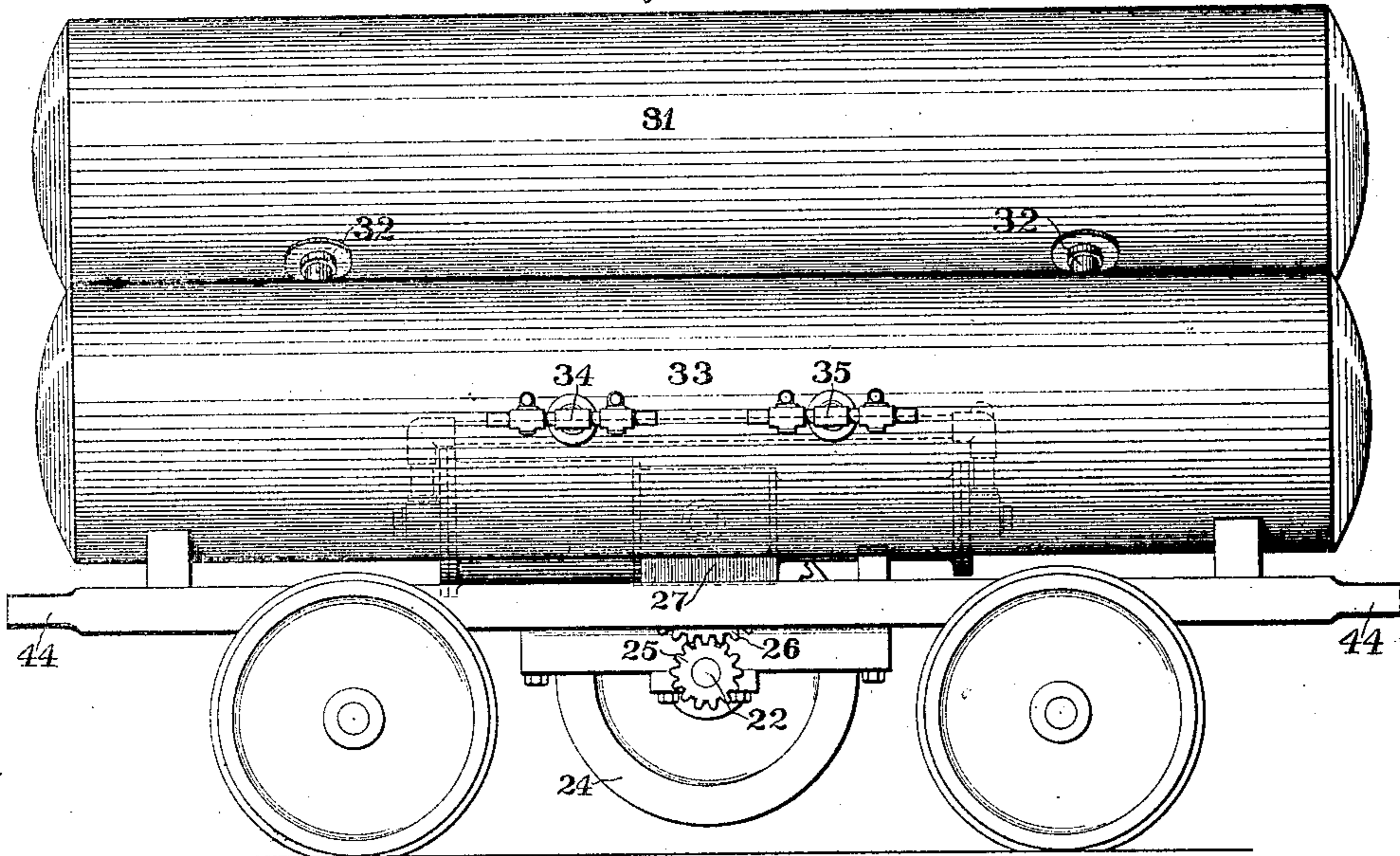
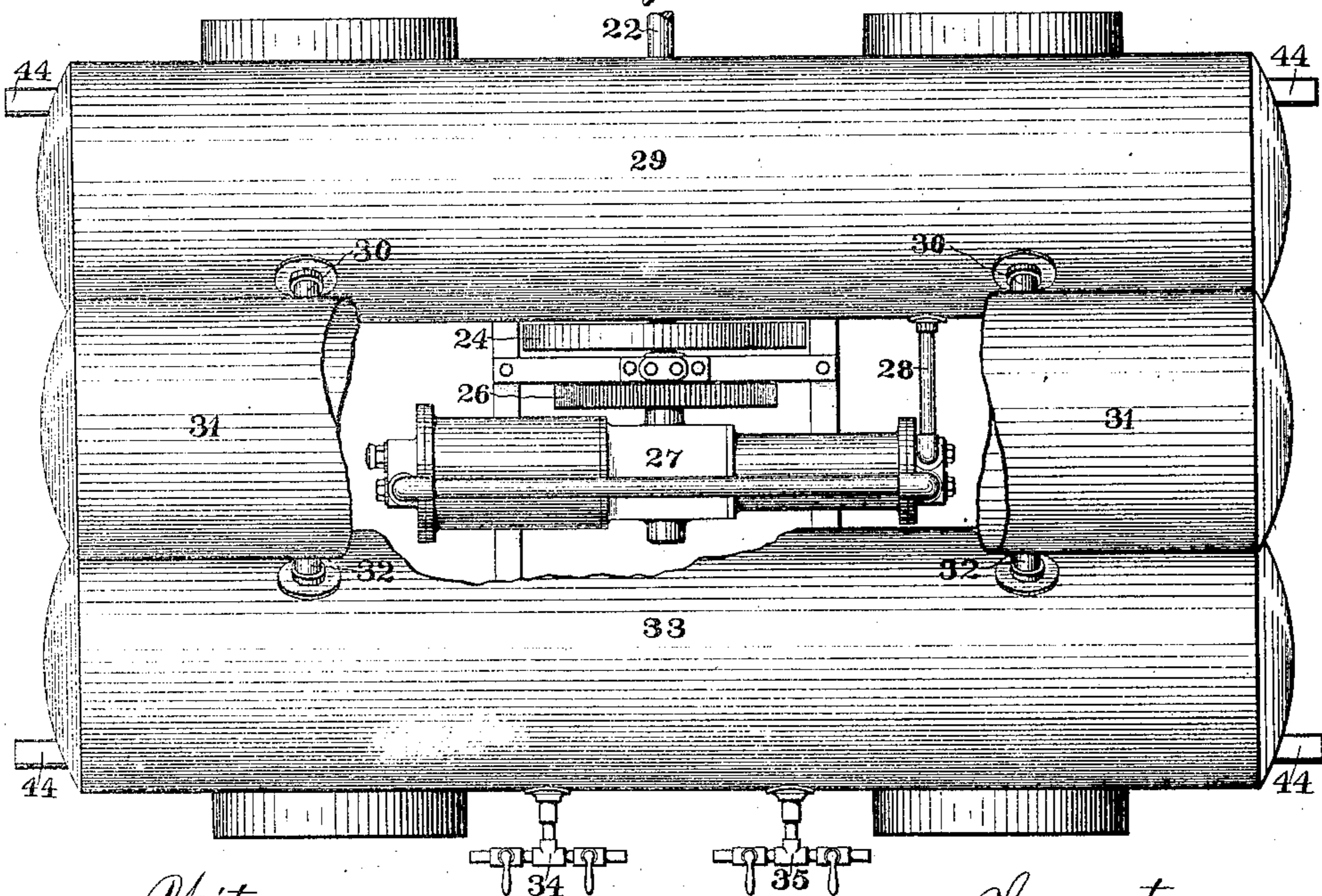


Fig. 3.



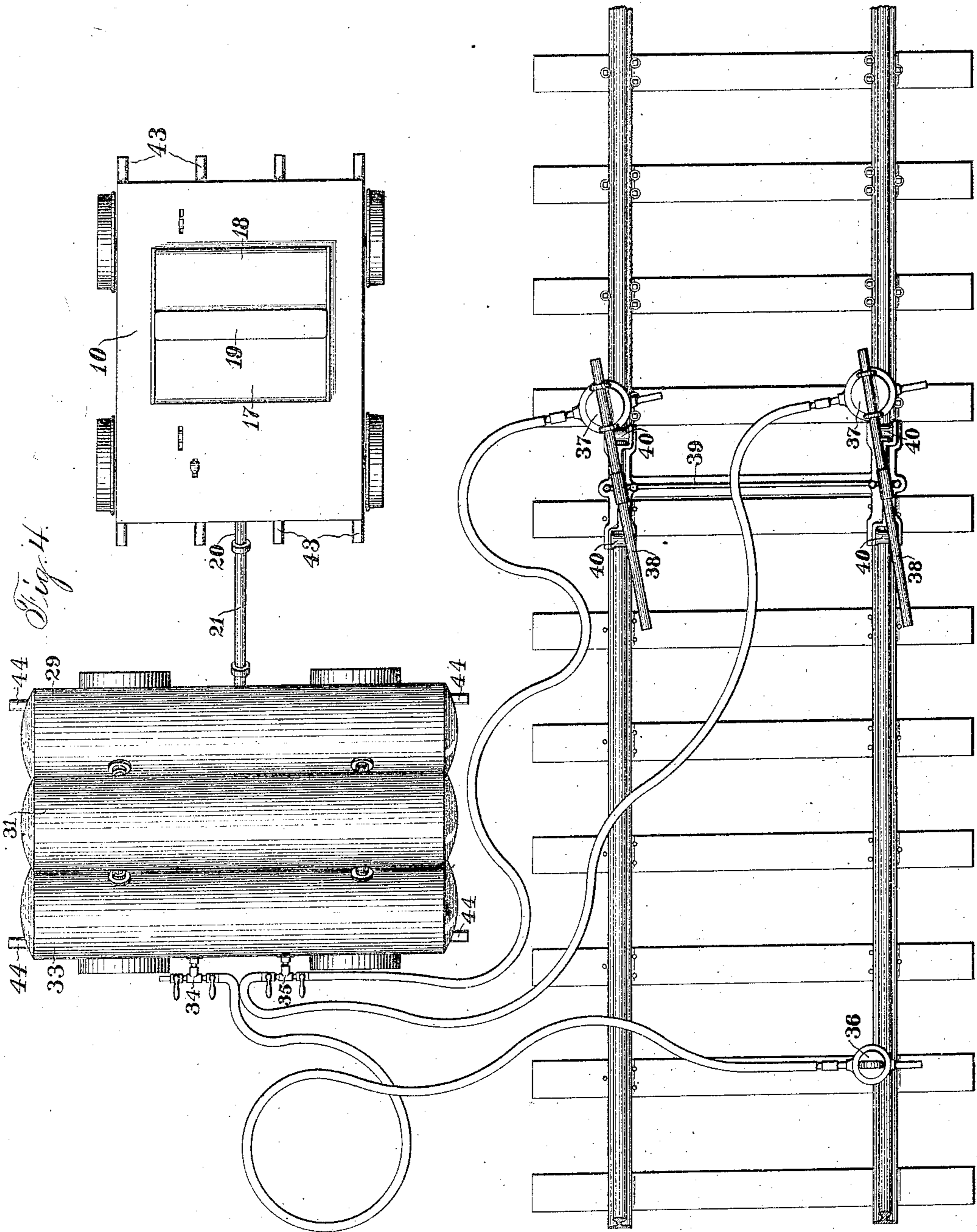
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UNITED STATES PATENT OFFICE.

HENRY W. JACOBS, OF TOPEKA, KANSAS.

TRACK-LAYING APPARATUS.

934,728.

Specification of Letters Patent. Patented Sept. 21, 1909.

Application filed September 1, 1908. Serial No. 451,276.

To all whom it may concern:

Be it known that I, HENRY W. JACOBS, of Topeka, in the county of Shawnee and State of Kansas, have invented a certain new and useful Improvement in Track-Laying Apparatuses, and do hereby declare that the following is a full and exact description thereof.

The object of my invention has been to provide an apparatus for laying track which shall have among others the following advantages: That it shall be capable of driving a tool, and preferably several tools, such as spike drivers and spike hole forming devices, for use in laying track. That while being capable of being made powerful enough to drive a number of track laying tools, it shall be so readily portable as to be easily placed on or removed from the track. That it shall enable the tools to be driven by compressed air. That it shall have a pump and a fluid jack, by which the apparatus can be lifted for removal from the track, and that it shall be capable of self-propulsion.

In the accompanying drawings Figure 1 is a side elevation of an apparatus embodying my invention; Fig. 2 is an end elevation of an air compressor car; Fig. 3 is a plan view of an air compressor car; Fig. 4 is a plan view of the apparatus beside a track and operating a number of tools; and Fig. 5 is a side elevation of a jack adapted to be operated by compressed air for use with my apparatus.

In the laying, repairing and adjusting of railroad track, power driven appliances can be used to great advantage. It is especially desirable to have a number of such tools driven by power; for instance, to have two devices for forming spike holes, which can be operated by men going ahead, and one device for driving the spikes, which can be operated by a man following, so that the work on the track progresses steadily, and the workmen do not lose time by going forward and back. In order to have the apparatus powerful enough for this purpose, the apparatus must necessarily be of considerable weight. It is imperative, however, that the apparatus be of such a nature that it can be readily removed from the track in order

to permit the passage of trains, and it may have to be removed from and replaced upon the track many times in the course of a day. The apparatus, which is the subject of the present application for patent, is designed to meet these conditions.

As the invention lies in the broad combination of the several parts, and not in the details of such parts, the details are not illustrated.

That form of my invention which is illustrated in the drawings is only one of many possible embodiments, and there are many equivalents which could be substituted for the several elements thereof. For this reason also the details of the several parts of the apparatus are unimportant.

In the illustrated embodiment of my invention, I provide a car 10 having upon it a motor of any desired sort. The motor which I prefer is an explosive engine which drives a shaft carrying a fly wheel 12. There is also a change-speed device 13 geared to the shaft of the engine, which device may be of the construction well known in automobiles, and which device is mounted upon a transverse shaft not shown. The shaft of the change speed device is connected, as by a sprocket chain 14, with a wheel 15 on one of the axles of the car, and thus the car can be propelled forward or backward or stopped as may be desired. The car is preferably provided with forward and rearward seats 17 and 18 respectively, separated by a back 19. The change speed device transmits motion to a shaft 20 which drives a jointed telescopic shaft 21. The shaft 21 is flexibly connected with a shaft 22 on a compressor car 23. A fly wheel 24 is carried by the shaft 22. Said shaft also carries a pinion 25 meshing with a gear 26 on the shaft of an air compressor 27 of any desired type. The said compressor pumps air, by means of a pipe 28, into a reservoir or tank 29, which latter communicates by a pipe 30 with a tank 31, and the latter is connected by a pipe 32 with a tank 33. The tank 33 has connections 34 and 35 for supplying air respectively to a spike-hole forming device 36, and to spike driving devices 37. Cocks are provided for shutting off and turning on the air

to the devices mentioned. The spike drivers are preferably mounted on horizontal arms 38 supported from a combined track gage and positioning device consisting of an H-shaped frame 39 having supporting rollers 40 journaled in the forked ends of the frame, and having projections on the underside of the arms that are adapted to engage both sides of each rail, and thus to position the rails.

The combined gage and positioning device is the subject of a separate application for patent. The motor car is also the subject of a separate application for patent. A pneumatic jack 41, the details of which are unimportant, is also connected by a pipe 42 with the compressor car, so that it can be used to lift one end of the compressor car or of the motor car, if desired, off the track, and thus the latter can be removed by simply swinging it horizontally.

In the operation of my apparatus, the apparatus travels along the track, to the point where it is to work, by the power of the motor car, the motor car drawing the compressor car. When the scene of the work has been reached, the motor car is either lifted off by its handles 43, or the jack is placed under one end and the car raised until its flanges are disengaged from the rails, when it can be shifted sidewise with ease and without lifting. The jack, if it is being used, is then placed under the other end of the motor car, and this end is removed in the same manner. Because the motor is not rigidly attached to the compressor car, the motor car can be lifted off by itself without also requiring that the weight of the compressor apparatus be lifted at the same time. Usually the motor car is lifted off by hand. The compressor car is either lifted off by means of its handles 44, or by means of the jack, operating first on one end and then on the other, as described in connection with the hand car. The compressor car in order to be powerful is necessarily heavy, and if the compressor apparatus and the motor were all mounted on the same car, the combined weight of all the parts would be so great as to make the burden of getting it off and on the track very heavy; but by dividing the weight between the two cars, it is entirely practicable to have a compressing apparatus of ample capacity driven by a motor of sufficient power, and yet to have the apparatus so readily portable that it can quickly be gotten off and on the track, as must be done so as not to interfere with the passage of trains. The combined track gage and positioning device is very light, and yet it automatically positions the rails at the standard distance apart, leaving the

workmen only the alinement to watch. The tools being driven by compressed air can be easily carried to any position and be operated at any desired angle.

As the compressed air apparatus serves as a reservoir of power, it can supply a demand in excess of the power of the motor for some time, and thus a motor of limited capacity can be used temporarily to drive tools requiring more power than that of the motor.

A pneumatic track rammer can be driven by my apparatus. The compressed air furnished by the plant can be used to advantage for many auxiliary purposes, such as sanding and painting buildings, bridges, railroad crossings, etc.

By the term "prime mover apparatus," as used in the claims, applicant means a motor or engine, or other apparatus for generating power, as distinguished from mere means for transmitting power, such as shafting or belt gearing.

I claim:

1. An apparatus for constructing railroad track, comprising a car having a motor thereon, a car having means for storing power, and track working appliances adapted to be driven by said power.
2. An apparatus for constructing railroad track, comprising a car having a motor thereon, a car having means for storing power, a track gage, tools supported from said gage, and means for communicating said power to said tools.
3. An apparatus for constructing railroad track, comprising a car having a motor thereon, a car having means adapted to store the power of said motor, a device adapted to position the rails relative to each other, track working appliances supported on said device, and means for communicating said power to said appliances.
4. In an apparatus for constructing railroad track, the combination of a car having a motor thereon, a car having an air compressor thereon and also having an air reservoir, track working appliances, and means for operating them by means of air from said reservoir.
5. In an apparatus for constructing railroad track, the combination of a car having a motor thereon, a car having an air compressor thereon, an air reservoir also mounted on said last-mentioned car, track working tools adapted to be operated by compressed air, and connections between said reservoir and said tools.
6. In an apparatus for constructing railroad track, the combination of a car having a motor thereon, a car having an air compressor thereon and also having an air

reservoir thereon, track working appliances, means for driving them by the air in such reservoir, a pneumatic jack, and means for connecting it with such reservoir.

5 7. In an apparatus for constructing railroad track, the combination of track working appliances, a prime mover apparatus for driving said appliances, and two cars upon

each of which a part of such a prime mover apparatus is supported.

In testimony that I claim the foregoing I have hereunto set my hand. 10

HENRY W. JACOBS.

Witnesses:

CLARKE J. MORRISON,
EDWIN A. AUSTIN.